IN THE CLAIMS:

Please write the claims to read as follows:

Please cancel claims 2 and 9-17 without prejudice.

1. (Currently Amended) A shutter mechanism for controlling reactants in a direct oxidation fuel cell system, having at least one fuel cell including a membrane electrode assembly, comprising:

a moving component disposed within the fuel cell between a source of a reactant and the membrane electrode assembly, ~~and~~ said moving component having a plurality of laterally displaced protrusions; and

a receiving element forming a plurality of laterally displaced openings corresponding to the plurality of laterally displaced protrusions, ~~having features formed therein that correspond with features on a receiving element~~ such that when said moving component is placed adjacent to said receiving element, the flow of said reactant is controlled

2. (Cancelled)

3. (Original) The shutter mechanism as defined in claim ~~3~~ 1 wherein said moving component is placed between a fuel source and an anode aspect of said fuel cell, and said receiving element is an anode current collector and when said moving component is placed adjacent to said anode current collector, fuel flow to said anode aspect is restricted.

4. (Currently Amended) A shutter mechanism for a direct oxidation fuel cell system, comprising:

(A) a fuel source;

(B) a direct oxidation fuel cell, including:

(i) a protonically conductive membrane having catalyst coatings on each of its major surfaces, being an anode aspect and a cathode aspect;

(ii) an anode current collector disposed generally at said anode aspect;

(iii) a cathode current collector disposed generally at said cathode aspect;

(iv) a passive mass transport barrier disposed generally between said fuel source and said anode aspect and spaced from said anode aspect to define a vapor gap in said fuel cell, said passive mass transport barrier controlling a rate of fuel delivery to said catalyzed anode aspect of said fuel cell;

(v) a movable shutter plate having a plurality of laterally displaced protrusions disposed within said vapor gap between said passive mass transport barrier and said anode current collector which forms a plurality of laterally displaced openings corresponding to the plurality of laterally displaced protrusions such that said movable shutter plate is adjustable to substantially or partially prevent fuel flow through said anode current collector to the anode aspect of said fuel cell; and

(vi) a load coupled between said anode current collector and said cathode current collector for utilizing the electricity generated by the fuel cell.

5. (Currently Amended) The shutter mechanism as defined in claim 4 further comprising:

said movable plate ~~having a plurality of protrusions disposed thereon correspond with openings in said anode current collector,~~ configured such that when said movable

plate is adjusted to a closed position, said protrusions interconnect with the openings in the anode current collector to substantially seal said openings, and said movable plate also having apertures therein interspersed with said protrusions in such a manner that when said movable plate is in an open position, said apertures allow for flow of fuel therethrough; and

said movable plate is adjustable in a direction perpendicular to the plane in which the plate is disposed, such that when it is adjusted, the plate travels generally in a z-axis within said vapor gap, closer to or further away from said anode current collector, to control fuel flow while not consuming substantially additional volume within said fuel cell.

6. (Original) The shutter mechanism as defined in claim 5 further comprising:

said protrusions have angled sides; and

said openings in said anode current collector being correspondingly angled such that said protrusions interconnect securely within said angled openings of said current collector to substantially seal said openings against fuel flow.

7. (Original) The shutter mechanism as defined in claim 5 wherein said protrusions are substantially comprised of a compliant material that is compressed into said openings when said movable plate is adjusted to a closed position.

8. (Original) The shutter mechanism as defined in claim 5 further comprising a coating disposed on the sides of said protrusions in said movable plate which further secures sealing of said anode current collector against fuel flow therethrough.

9-17. (Cancelled)

Please insert the following new claims 18 *et seq.*:

18. (New) A method, comprising:

sourcing a reactant to a membrane electrode assembly; and

moving a movable component disposed within the fuel cell perpendicularly between a source of a reactant and the membrane electrode assembly having a plurality of laterally displaced protrusions in relation to a receiving element to control the flow of the reactant to the membrane electrode assembly.

19. (New) The method of claim 18, wherein the protrusions have angled sides and the openings in the anode current collector are correspondingly angled such that the protrusions interconnect securely within the angled openings of the current collector to seal the openings against fuel flow.

20. (New) The method of claim 18, wherein the protrusions are substantially comprised of a compliant material that is compressed into the openings when the movable plate is adjusted to a closed position.

21. (New) The method of claim 18, further comprising:

sealing of the anode current collector against fuel flow therethrough using a coating disposed on the sides of the protrusions in the movable component.

22. (New) The method of claim 18, wherein the movable component further comprises a wide surface area as compared to a thickness of the movable component.

23. (New) The method of claim 18, further comprising:

vaporizing fuel as it flows through a passive barrier membrane toward the membrane electrode assembly.

24. (New) The method of claim 18, wherein the movable component is disposed within an anode vapor gap of the fuel cell.

25. (New) The method of claim 18, wherein the moveable component is utilized over a plurality of fuel cells as a single plate.

26. (New) The method of claim 18, wherein the protrusions are disposed within the openings of the membrane electrode assembly and are configured to move within the opening to control the flow of the reactant.